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10/511,236	09/26/2005	Shengyang Huang	F-8417	1828

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EXAMINER

NG, EUNICE

ART UNIT	PAPER NUMBER
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2626

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,236

Applicant(s)

HUANG ET AL.

Examiner

Eunice Ng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In response to the Office Action mailed 8/3/07, Applicants have submitted an Amendment, filed 12/6/07, amending claims 1, 5, 9 and 13, without adding new matter, and arguing to traverse claim rejections.

Response to Arguments

2. Applicant's arguments filed 12/6/07 have been fully considered but they are not persuasive, because: Applicants submit that Hirose fails to teach a conversation database including a plurality of reply sentences. The examiner respectfully disagrees. As indicated in the previous office action, Hirose teaches storing a dialogue stream. Further, as described in paragraphs 83-84, the dialogue stream comprises a plurality of message documents, which contain data representing the contents of conversations (sentences). Thus, Hirose would fairly teach or suggest a conversation database including a plurality of reply sentences.

Applicants submit that Hirose fails to teach a determination of a type of input including affirmation or negation. The examiner respectfully disagrees, since Hirose teaches evaluation based on matching (paragraph 177, 192 and 219), which would necessarily require determination of what the input is, including an affirmation or negation.

Applicants submit that Hirose fails to teach topic identification information. The examiner respectfully disagrees. Hirose teaches a subject input box (for example in paragraphs 116 and 119) and retrieval (paragraph 188).

Applicants submit that Hirose fails to teach ranking according to the frequency of search of a piece of second morpheme information at the topic search unit. However, as indicated in the

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previous office action, Hirose at paragraphs 177, 189, and 198 teaches generating a keyword list, which includes information representing the frequency of appearance in the message documents contained in the dialogue streams and a related dialogue candidate list, and paragraph 258 teaches their ranking.

Therefore, the amended pending claims stay rejected over Hirose and de Hita, and their rejection is repeated, *mutatis mutandis* for claim amendments, below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-5 and 9-13** are rejected under 35 U.S.C. 102(e) as being anticipated by Hirose et al. (PGPUB 2002/0143776), hereinafter referenced as Hirose.

Regarding **claims 1 and 9**, Hirose discloses a conversation control system which retrieves based on input information received from a user, a reply sentence to the input information, comprising:

a morpheme extracting unit (extracts morphemic information) configured to extract, based on a character string corresponding to the input information, at least one morpheme constituting

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a minimum unit of the character string, as first morpheme information (column 11, paragraph 0185);

a conversation database (stores a dialogue) configured to store pieces of second morpheme information each including a morpheme including a character, a string of characters or a combination thereof, and a plurality of reply sentences, which are associated with the pieces of second morpheme information (column 3, paragraphs 0055-0061 with column 4, paragraph 0073, 0083-0084);

a topic search unit (subject) configured to compare, based on the first morpheme information extracted at the morpheme extracting unit, the first morpheme information with the pieces of second morpheme information, and to search a piece of second morpheme information corresponding to the first morpheme information from among the pieces of second morpheme information (column 5, paragraph 0085 with column 6, paragraph 0116 and column 7, paragraphs 0119-0132 with column 11, paragraph 0188); and

a reply retrieval unit configured to retrieve, based on the piece of second morpheme information searched at the topic search unit, a reply sentence associated with the piece of second morpheme information (response; column 3, paragraph 0057 with column 4, paragraphs 0072-0080 and column 5, paragraph 0092).

Regarding **claims 2 and 10**, Hirose discloses a conversation control system further comprising:

an input type determining unit configured to determine, based on the character string corresponding to the input information, a type of input including affirmation or negation

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(evaluates based on matching; column 10, paragraph 0177 with column 11, paragraph 0192 and column 13, paragraph 0219); wherein,

the pieces of second morpheme information are each associated with a plurality of reply sentences (column 11, paragraph 0185);

the reply sentences are each associated with types of responses (column 11, paragraphs 0185-0188); and

the reply retrieval unit is configured to compare, based on the piece of second morpheme information searched at the topic search unit, the types of responses associated with the searched piece of second morpheme information (morphemic information) with the determined type of input, to search a type of response corresponding to the type of input, to search a type of response corresponding to the type of input from among the types of response, and to retrieve a reply sentence associated with the retrieved type of response (column 11, paragraphs 0185-0188).

Regarding **claims 3 and 11**, Hirose discloses a conversation control system and method further comprising:

a topic identification information search unit (subject) configured to compare, based on the first morpheme information extracted at the morpheme extracting unit, the first morpheme information with pieces of topic identification information from among the pieces of topic identification information (column 5, paragraph 0085 with column 6, paragraph 0116 and column 7, paragraphs 0119-0132 with column 11, paragraph 0188); wherein,

the pieces of topic identification information are each associated with the pieces of second morpheme information (morphemic; column 11, paragraph 0185);

the pieces of second morpheme information are each associated with the reply sentences (column 11, paragraph 0185); and

the topic search unit is configured to compare (match), based on the piece of topic identification information searched at the topic identification information search unit, pieces of second morpheme information associated with the piece of topic identification information with the first morpheme extracting unit, and to search a piece of second morpheme information corresponding to the first morpheme information from among the pieces of second morpheme information (column 10, paragraph 0177 with column 11, paragraph 0192 and column 13, paragraph 0219 and column 7, paragraph 0119).

Regarding **claims 4 and 12**, Hirose discloses a conversation control system and method further comprising:

a supplemental unit (add) configured to add the piece of topic identification information searched at the topic identification information search unit to the first morpheme information extracted at the morpheme extracting unit, when no piece of second morpheme information corresponding to the extracted first morpheme information can be searched at the topic search unit (column 10, paragraph 0177 and column 13, paragraph 0233 and column 4, paragraph 0073); wherein,

the topic search unit is configured to search (subject), based on the first morpheme information with the piece of topic identification information added at the supplementation unit, a piece of second morpheme information corresponding to the first morpheme information from among the pieces of second morpheme information (column 7, paragraph 0119 with column 10, paragraph 0177 and column 13, paragraph 0233 and column 4, paragraph 0073).

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Regarding **claims 5 and 13**, Hirose discloses the conversation control system and method further comprising:

a ranking unit (rank) configured to perform ranking according to the frequency of search of a piece of second morpheme information at the topic search unit (column 15, paragraph 0258 and column 10, paragraph 0177 with column 11, paragraphs 0189 and 0198); wherein,

the pieces of second morpheme information are each associated with a plurality of reply sentences (column 11, paragraph 0185);

the reply sentences are each associated with priority levels (column 15, paragraph 0258);
and

the reply retrieval unit is configured to compare, based on the piece of second morpheme information searched at the topic search unit, the priority levels associated with the reply sentences with the rank determined at the ranking unit, to identify a priority level corresponding to the rank from among the priority levels, and to retrieve a reply sentence associated with an identified priority level (column 15, paragraph 0258 with column 11, paragraph 0185).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 6-8 and 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose in view of de Hita et al. (USPN 6,411,924), hereinafter referenced in view of de Hita.

Regarding **claims 6 and 14**, it is interpreted and rejected for the same reasons as set forth in claim 1. In addition, Hirose discloses the conversation control system and method, but does not specifically teach a system and method wherein:

the reply retrieval unit is configured to perform processing of not retrieving the reply sentence, when the rank determined at the ranking unit is the lowest.

de Hita discloses a system and method further comprising the reply retrieval unit is configured to perform processing of not retrieving the reply sentence, when the rank determined at the ranking unit is the lowest (column 15, lines 10-20 with column 18, lines 23-67 and claim 24), to obtain linguistic relevance.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hirose's system and method wherein it further comprises the reply retrieval unit is configured to perform processing of not retrieving the reply sentence, when the rank determined at the ranking unit is the lowest, as taught by de Hita, to enable a user to efficiently and intuitively select, filter, or browse through a group of selected documents based on their linguistic content (column 9, lines 40-43).

Regarding **claims 7 and 15**, it is interpreted and rejected for the same reasons as set forth in claim 1. Hirose discloses a conversation control system and method, but does not specifically teach a system and method wherein:

the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts; and

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the topic identification information search unit is configured to compare, based on the first morpheme information extracted at the morpheme extracting unit, the extracted first morpheme information with pieces of topic identification information related to the previously searched piece of topic identification information as superordinate concepts, and to search a piece of topic identification information corresponding to the morpheme constituting the first morpheme information from among the pieces of topic identification information.

de Hita discloses a system and method further comprising:

the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts (subordinate topic; column 10, lines 1-9); and

the topic identification information search unit is configured to compare (matches), based on the first morpheme information extracted at the morpheme extracting unit, the extracted first morpheme information with pieces of topic identification information related to the previously searched piece of topic identification information as superordinate concepts (superior), and to search a piece of topic identification information corresponding to the morpheme constituting the first morpheme information from among the pieces of topic identification information (column 10, lines 1-42 with column 20, lines 37-49), so that the user may efficiently and intuitively identify a topic as being a subtopic of a superior topic of a subordinate topic.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hirose's system and method wherein it further comprises predetermined relationships as superordinate or subordinate concepts, as taught by de Hita, therefore, a user may efficiently and intuitively identify topics in accordance with their

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importance in the selected documents and also with knowledge of the relationships among such topics (column 10, lines 1-9).

Regarding **claims 8 and 16**, it is interpreted and rejected for the same reasons as set forth in claim 1. Hirose discloses the conversation control system and method, but does not specifically teach wherein:

the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts; and

when retrieving a piece of topic identification information corresponding to the morpheme constituting the first morpheme information, the topic identification information search unit is configured to search another piece of topic identification information associated with a piece of topic identification information which is a superordinate concept to the searched piece of topic identification information.

de Hita teaches a system wherein:

the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts (subordinate; column 10, lines 1-9); and

when retrieving a piece of topic identification information corresponding to the morpheme constituting the first morpheme information (morphological analysis; column 9, lines 40-59 with column 15, lines 21-35), the topic identification information search unit is configured to search another piece of topic identification information associated with a piece of topic identification information which is a superordinate concept to the searched piece of topic identification information (column 10, lines 1-42 with column 20, lines 37-49), that the user may

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efficiently and intuitively identify a topic as being a subtopic of a superior topic of a subordinate topic.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hirose's system and method wherein the pieces of topic identification information are associated with one another in predetermined relationships as superordinate concepts or subordinate concepts; and

when retrieving a piece of topic identification information corresponding to the morpheme constituting the first morpheme information, the topic identification information search unit is configured to search another piece of topic identification information associated with a piece of topic identification information which is a superordinate concept to the searched piece of topic identification information, as taught by de Hita, therefore, a user may efficiently and intuitively identify topics in accordance with their importance in the selected documents and also with knowledge of the relationships among such topics (column 10, lines 1-9).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eunice Ng whose telephone number is 571-272-2854. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EN
2/17/08



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